

## CPC

## COOPERATIVE PATENT CLASSIFICATION

## D01H

**SPINNING OR TWISTING** (unwinding, paying-out, forwarding, winding or coiling filamentary material not intimately associated with spinning or twisting B65H; cores, formers, supports or holders for coiled or wound material, e.g. bobbins B65H; twisting oakum [D01G 35/00](#); crimping or curling of fibres, filaments or yarns [D02G 1/00](#); making chenille D03D, [D04D 3/00](#); testing yarns, rovings, slivers, fibres, or fibre webs G01)

**Kinds or types of spinning or twisting machines; Drafting machines or arrangements; Twisting arrangements**

## D01H 1/00

**Spinning or twisting machines in which the product is wound-up continuously** (open-end spinning machines [D01H 4/00](#); {doubling of yarns [B65H 54/00+T](#); doubled, plied or cabled threads [D02G 3/28](#), e.g. using hollow spindles [D02G 3/283](#); spin-twisting [D02G 3/281](#); threads with alternately "S" and "Z" direction of twist, e.g. self-twist process, [D02G 3/286](#); wrapping strands of filaments or staple fibres by a binder yarn [D02G 3/38](#)})

## D01H 1/003

. {Twisting machines in which twist is imparted from the supply packages, e.g. uptwist}

## D01H 1/006

. {Twisting machines in which twist is imparted at the paying-out and take-up stations}

## D01H 1/02

. ring type {(arrangements with two or more spinning or twisting devices in combination [D01H/90](#))}

## D01H 1/025

.. {with a condensing device between drafting system and spinning unit}

## D01H 1/04

. flyer type

## D01H 1/06

. cap type

## D01H 1/08

. cup, pot or disc type, in which annular masses of yarn are formed by centrifugal action

## D01H 1/10

. for imparting multiple twist, e.g. two-for-one twisting

## D01H 1/101

.. {in which multiple twist is imparted at the take-up stations}

## D01H 1/103

... {Two-for-one twisting}

## D01H 1/105

.. {Arrangements using hollow spindles, i.e. the yarns are running through the spindle of the unwound bobbins}

## D01H 1/106

... {Two-for-one twisting}

## D01H 1/108

.... {for two or more supply bobbins one on top of the other}

## D01H 1/11

. Spinning by false-twisting {(twisting by false-twisting [D01H 7/92](#); [D02G 3/28](#); increasing the strength of a roving or sliver by false-twisting [D01H 7/92](#), during drafting [D01H 5/28](#))}

## D01H 1/115

.. using pneumatic means

## D01H 1/14

. Details (drafting arrangements [D01H 5/00](#); twisting arrangements [D01H 7/00](#))

## D01H 1/16

.. Framework; Casings; Coverings {Removal of heat; Means for generating overpressure of air against infiltration of dust; Ducts for electric cables}

D01H 1/162	...	{for ring type}
D01H 1/164	...	{for flyer type}
D01H 1/166	...	{for two-for-one type}
D01H 1/168	...	{Arrangements for the sound-dampening of the machines (in general <a href="#">G10K 11/00</a> )}
D01H 1/18	..	Supports for supply packages
D01H 1/183	...	{Overhead suspension devices}
D01H 1/186	...	{for supplying from cans}
D01H 1/20	..	Driving or stopping arrangements (for open-end spinning machines <a href="#">D01H 4/12</a> , <a href="#">D01H 4/20</a> , <a href="#">D01H 4/42</a> ; safety devices <a href="#">D01H 13/14</a> )
D01H 1/22	...	for rollers {of drafting machines; Roller speed control}(regulating or varying draft <a href="#">D01H 5/32</a> )
D01H 1/24	...	for twisting {or spinning} arrangements, e.g. spindles (braking arrangements for spindles <a href="#">D01H 7/22</a> ; interrelated flyer and bobbin drive mechanisms <a href="#">D01H 7/50</a> )
D01H 1/241	....	driven by belt
D01H 1/242	....	driven by toothed wheels
D01H 1/243	....	driven by friction discs
D01H 1/244	....	each spindle driven by an electric motor
D01H 1/26	....	with two or more speeds; with variable-speed arrangements
D01H 1/28	...	for two or more machine elements possessing different characteristics but in operative association
D01H 1/30	....	with two or more speeds; with variable-speed arrangements
D01H 1/305	.....	{Speed control of the spindles in response to the displacements of the ring rail}
D01H 1/32	...	for complete machines
D01H 1/34	....	with two or more speeds; with variable-speed arrangements {e.g. variation of machine speed according to growing bobbin diameter (responsive to reduction in material tension <a href="#">D01H 13/16</a> )}
D01H 1/36	..	Package-shaping arrangements, e.g. building motions {e.g. control for the traversing stroke of ring rails; Stopping ring rails in a predetermined position}
D01H 1/365	...	{for flyer type}
D01H 1/38	..	Arrangements for winding reserve lengths of yarn on take-up packages {or spindles}, e.g. transfer tails
D01H 1/385	...	{Removing waste reserve lengths from spindles}
D01H 1/40	..	Arrangements for connecting continuously-delivered material to bobbins or the like
D01H 1/42	..	Guards or protectors for yarns or threads, e.g. separator plates, anti-ballooning devices (anti-ballooning devices on spindles <a href="#">D01H 7/18</a> )
D01H 1/422	...	{Separator plates}
D01H 1/425	...	{Anti-ballooning rings}
D01H 1/427	...	{Anti-ballooning cylinders, e.g. for two-for-one twist machine (with combined cleaning effect <a href="#">D01H 11/00</a> )}
<b>D01H 3/00</b>		<b>Spinning or twisting machines in which the product is wound-up intermittently, e.g. mules</b>
D01H 3/02	.	Details (drafting arrangements <a href="#">D01H 5/00</a> ; twisting arrangements <a href="#">D01H 7/00</a> )

- D01H 3/04 . . . Carriages; Mechanisms effecting carriage movements
- D01H 3/06 . . . Carriages; Carriage rails; Squaring motions
- D01H 3/08 . . . Drawing-out or taking-in motions
- D01H 3/10 . . . Moving-creel arrangements, e.g. for twiners
- D01H 3/12 . . Package-shaping motions; Faller arrangements
- D01H 3/14 . . Roller-driving arrangements ([drafting arrangements of general application in spinning machines D01H 5/18](#))
- D01H 3/16 . . Spindle-driving arrangements ([spindles, spindle bearings, spindle supports D01H 7/04](#))
- D01H 3/18 . . . Tin rollers; Driving arrangements intimately associated with tin rollers
- D01H 3/20 . . . Spindle-driving arrangements during drawing-out or backing-off
- D01H 3/22 . . . Spindle-driving arrangements during taking-in
- D01H 3/24 . . . . Quadrant motions; Nosing motions
- D01H 3/26 . . Driving or stopping arrangements not otherwise provided for; Locking motions ([safety devices D01H 13/14](#)){[Control of machines](#)}

**D01H 4/00** **Open-end spinning machines or arrangements for imparting twist to independently moving fibres separated from slivers; Piecing arrangements therefor; Covering endless core threads with fibres by open-end spinning techniques** {([arrangements with two or more spinning or twisting devices of different types in combination D01H 7/90](#))}

#### **NOTE**

In this group, the expression "open-end spinning" covers such expressions as "break spinning", "ringless spinning", "rotor spinning" and "friction spinning", but does not cover the expression "spinning by false-twisting"

- D01H 4/02 . . imparting twist by a fluid, e.g. air vortex
- D01H 4/04 . . imparting twist by contact of fibres with a running surface
- D01H 4/06 . . co-operating with suction means ([D01H 4/08, D01H 4/16 take precedence](#))
- D01H 4/08 . . Rotor spinning, i.e. the running surface being provided by a rotor
- D01H 4/10 . . . Rotors
- D01H 4/12 . . . Rotor bearings; Arrangements for driving or stopping ([control therefor D01H 4/42](#))
- D01H 4/14 . . . . Rotor driven by an electric motor
- D01H 4/16 . . Friction spinning, i.e. the running surface being provided by a pair of closely spaced friction drums, e.g. at least one suction drum {([false twisting with friction drums D01H 1/11](#))}
- D01H 4/18 . . . Friction drums, e.g. arrangement of suction holes
- D01H 4/20 . . . Drum bearings; Arrangements for driving or stopping ([control therefor 4/42](#))
- D01H 4/22 . . Cleaning of running surfaces
- D01H 4/24 . . . in rotor spinning
- D01H 4/26 . . . in friction spinning
- D01H 4/28 . . using electrostatic fields

- D01H 4/30 . Arrangements for separating slivers into fibres; Orienting or straightening fibres, {e.g. using guide-rolls}
- D01H 4/32 . . . using opening rollers {(stopping of rovings or slivers [D01H 13/18](#))}
- D01H 4/34 . . . using air-jet streams
- D01H 4/36 . . . with means for taking away impurities
- D01H 4/38 . Channels for feeding fibres to the yarn forming region
- D01H 4/40 . Removing running yarn from the yarn forming region, e.g. using tubes
- D01H 4/42 . Control of driving or stopping
- D01H 4/44 . . . in rotor spinning
- D01H 4/46 . . . in friction spinning
- D01H 4/48 . Piecing arrangements; Control therefor {(stopping roving [D01H 13/18](#))}
- D01H 4/50 . . . for rotor spinning
- D01H 4/52 . . . for friction spinning
- D01H 5/00** **Drafting machines or arrangements** {Threading of roving into drafting machine}{arrangements in which draft is dependent on linear movement of take-up spindles, e.g. in mules, [D01H 3/00](#); devices for combing or orienting fibres for open-end spinning machines [D01H 4/30](#); {increasing the strength of a roving or sliver by false-twisting [D01H 7/92](#), during drafting [D01H 5/28](#), after drafting and before spinning according to groups [D01H 1/02](#) to [D01H 1/08](#), [D01H 7/90](#); depositing materials in cans after drafting [B65H 54/76](#) + T)}
- D01H 5/005 . {Arrangements for feeding or conveying the slivers to the drafting machine}
- D01H 5/02 . Gill boxes or other drafting machines employing fallers or like pinned bars (lubricating fibres in gill boxes [D01G 29/00](#))
- D01H 5/04 . . . with pinned bars actuated by screw members
- D01H 5/06 . . . . Intersecting gill boxes
- D01H 5/08 . . . with bars connected by links, chains, or the like
- D01H 5/10 . . . with pinned bars unconnected with each other but actuated through pressure of one against another
- D01H 5/12 . . . Details
- D01H 5/14 . . . . Pinned bars
- D01H 5/16 . . . . Framework; Casings; Coverings
- D01H 5/18 . Drafting machines or arrangements without fallers or like pinned bars
- D01H 5/20 . . . in which fibres are controlled by contact with stationary or reciprocating surfaces
- D01H 5/22 . . . in which fibres are controlled by rollers only
- D01H 5/24 . . . . with porcupines or like pinned rotary members
- D01H 5/26 . . . in which fibres are controlled by one or more endless aprons
- D01H 5/28 . . . in which fibres are controlled by inserting twist during drafting ({spinning by false-twisting [D01H 1/11](#)}; mules [D01H 3/00](#); {twisting by false-twisting [D01H 7/92](#)}; constructions of false-twist devices [D02G 1/04](#))

- D01H 5/30 .. incorporating arrangements for severing continuous filaments, e.g. in direct spinning ([converting tows to slivers or yarns D01G 1/06](#))
- D01H 5/32 .. Regulating or varying draft
- D01H 5/34 ... by manual adjustments
- D01H 5/36 ... according to a pre-arranged pattern, e.g. to produce slubs
- D01H 5/38 ... in response to irregularities in material; {[Measuring irregularities](#)}
- D01H 5/385 .... {[employing hydraulic or pneumatic time-delay devices](#)}
- D01H 5/40 .... employing mechanical time-delay devices
- D01H 5/42 .... employing electrical time-delay devices
- D01H 5/44 .. Adjusting drafting elements, e.g. altering ratch
- D01H 5/46 .. Loading arrangements
- D01H 5/48 ... using weights
- D01H 5/50 ... using springs
- D01H 5/505 .... {[for top roller arms](#)}
- D01H 5/52 ... using fluid pressure
- D01H 5/525 .... {[for top roller arms](#)}
- D01H 5/54 ... using magnetic arrangements
- D01H 5/56 .. Supports for drafting elements ([saddles or top roller arms forming essential components of weighting arrangements D01H 5/48](#))
- D01H 5/565 ... {[Top roller arms](#)}
- D01H 5/58 .. Arrangements for traversing drafting elements ([traversing arrangements for roving guides D01H 13/06](#))
- D01H 5/60 .. Arrangements maintaining drafting elements free of fibre accumulations
- D01H 5/62 ... Non-rotary cleaning pads or plates; Scrapers
- D01H 5/625 .... {[in cooperation with suction or blowing means](#)}
- D01H 5/64 ... Rollers or aprons with cleaning surfaces
- D01H 5/645 .... {[in cooperation with suction or blowing means](#)}
- D01H 5/66 ... Suction devices {[exclusively; \(D01H 5/625 and D01H 5/645 take precedence; in cooperation with thread breakage detecting means D01H 13/1691\)](#)}
- D01H 5/68 .... Suction end-catchers
- D01H 5/70 .. Constructional features of drafting elements
- D01H 5/72 ... Fibre-condensing guides ([guides for slivers, rovings, or yarns applicable solely for spinning, twisting, curling, or crimping purposes D01H 13/04; {combined with false twisting before drafting or before spinning according to groups D01H 1/02 to D01H 1/08 : D01H 7/92}](#))
- D01H 5/74 ... Rollers {[or roller bearings](#)}
- D01H 5/76 .... Loose-boss assemblies
- D01H 5/78 .... with flutes or other integral surface characteristics
- D01H 5/80 .... with covers; Cots or covers
- D01H 5/82 .... Arrangements for coupling roller sections
- D01H 5/84 .... Porcupines
- D01H 5/86 ... Aprons; Apron supports; Apron tensioning arrangements
- D01H 5/88 .... Cradles; Tensors

**D01H 7/00****Spinning or twisting arrangements (for open-end spinning [D01H 4/00](#))**

- D01H 7/02 . for imparting permanent twist
- D01H 7/04 .. Spindles ({bearings for hollow spindles [D01H 7/88](#)}; spindle bearings, supports therefor, in general [F16C](#))
  - D01H 7/041 ... {Spindles with sliding contact bearings ([D01H 7/045](#) takes precedence)}
  - D01H 7/042 ... {Spindles with rolling contact bearings ([D01H 7/045](#) takes precedence)}
  - D01H 7/044 ... {Spindles with fluid bearings}
  - D01H 7/045 ... {Spindles provided with flexible mounting elements for damping vibration or noise, or for avoiding or reducing out-of-balance forces due to rotation (in general [F16F 15/00](#))}
  - D01H 7/047 .... {with springs}
  - D01H 7/048 .... {with means using plastic deformation of members}
  - D01H 7/06 ... Stationary spindles with package-holding sleeves
  - D01H 7/08 ... Mounting arrangements
    - D01H 7/10 .... Spindle supports; Rails; Rail supports, e.g. poker guides
    - D01H 7/12 .... Bolsters; Bearings
    - D01H 7/14 .... Holding-down arrangements
  - D01H 7/16 ... Arrangements for coupling bobbins or like to spindles
  - D01H 7/18 ... Arrangements on spindles for suppressing yarn balloons (thread guards or protectors [D01H 1/42](#))
  - D01H 7/20 ... Lubricating arrangements
  - D01H 7/22 ... Braking arrangements
    - D01H 7/2208 .... {using mechanical means}
    - D01H 7/2216 ..... {with one or two manually actuated shoe-brakes acting on a part of the whorl}
    - D01H 7/2225 ..... {the braking means surrounding nearly the whole periphery of the whorl}
    - D01H 7/2233 ..... {by suppressing the driving means, e.g. by declutching}
    - D01H 7/2241 ..... {the belt being moved off the driven whorl}
    - D01H 7/225 ..... {and the spindle being braked simultaneously}
    - D01H 7/2258 ..... {the pivoted spindle being pulled off the belt}
    - D01H 7/2266 ..... {and braked simultaneously}
    - D01H 7/2275 .... {using hydraulically or pneumatically operated brakes}
    - D01H 7/2283 .... {using electromagnetically operated brakes}
    - D01H 7/2291 .... {characterised by the control of braking means, e.g. operated by a yarn break-detector or tension device}
  - D01H 7/24 .. Flyer or like arrangements (multiple-twist arrangements [D01H 7/86](#))
  - D01H 7/26 ... Flyer constructions
    - D01H 7/28 .... arranged to guide material over exterior of legs
    - D01H 7/30 .... with guide channels formed in legs, e.g. slubbing flyers
    - D01H 7/32 ..... with pressing devices
    - D01H 7/34 .... with haul pulleys or like arrangements
    - D01H 7/36 .... with traversing devices

D01H 7/38	....	Ring flyers
D01H 7/40	...	Flyer supports, e.g. rails
D01H 7/42	...	Arrangements coupling flyers to spindles
D01H 7/44	...	Drag arrangements for bobbins or flyers
D01H 7/46	...	Devices attached to, or integral with, flyers for temporarily increasing twist in material passing to them
D01H 7/48	...	Eyes or like guiding arrangements ( <a href="#">D01H 7/46</a> takes precedence)
D01H 7/50	...	Interrelated flyer and bobbin drive mechanisms, e.g. winding-on motions for cotton-roving frames ({variation of machine speed according to growing bobbin diameter <a href="#">D01H 1/34</a> }; package-building mechanisms <a href="#">D01H 1/36</a> )
D01H 7/52	..	Ring-and-traveller arrangements
D01H 7/54	...	with fixed rings
D01H 7/56	...	with freely-rotatable rings; with braked or dragged rings; {Lubricating arrangements therefor}
D01H 7/565	....	{with fluid bearings}
D01H 7/58	...	with driven rings; {Bearings or braking arrangements therefor}
D01H 7/585	....	{by fluid driving means}
D01H 7/60	...	Rings or travellers; Manufacture thereof not otherwise provided for ( <a href="#">hand tools for applying travellers to rings <a href="#">D01H 17/02</a></a> ){Cleaning means for rings}
D01H 7/602	....	{Rings}
D01H 7/604	....	{Travellers}
D01H 7/606	.....	{Driving means for travellers}
D01H 7/608	.....	{Cleaning means for travellers}
D01H 7/62	...	Arrangements providing lubricant for travellers
D01H 7/64	...	Ring supports, e.g. ring rails ( <a href="#">poker guides or other rail supports 7/10</a> )
D01H 7/66	..	Cap arrangements
D01H 7/68	...	Cap constructions
D01H 7/70	...	Arrangements for supporting caps on spindles
D01H 7/72	...	Bobbin-supporting arrangements, e.g. bobbin rails ( <a href="#">poker guides or other rail supports <a href="#">D01H 7/10</a></a> )
D01H 7/74	..	Cup or like arrangements
D01H 7/76	...	Rotary discs
D01H 7/78	...	Constructions of cups, e.g. spinning boxes
D01H 7/80	....	adapted to collect wet yarns
D01H 7/82	...	Casings or guards for rotary cups or the like
D01H 7/84	...	Spindles or yarn carriers for co-operation with rotary cups ( <a href="#">removing yarn from centrifugal cups on to yarn carriers <a href="#">D01H 9/06</a></a> )
D01H 7/86	..	Multiple-twist arrangements, e.g. two-for-one twisting devices {Threading of yarn; Devices in hollow spindles for imparting false twist}
D01H 7/862	...	{Arrangements for holding the bobbin in a fixed position}
D01H 7/864	...	{Coupling devices between the fixed and the rotative parts}
D01H 7/866	...	{Means to facilitate the unwinding of yarn}
D01H 7/868	...	{Yarn guiding means, e.g. guiding tubes}
D01H 7/88	..	Hollow-spindle arrangements ( <a href="#">D01H 7/86</a> takes precedence)



- D01H 7/90 .. Arrangements with two or more {spinning or} twisting devices {of different types} in combination ({D01H 1/006}, D01H 7/86, D01H 7/88 take precedence)
- D01H 7/92 . for imparting transient twist {i.e. false twist (D01H 1/11 takes precedence)}
- D01H 7/923 .. {by means of rotating devices}
- D01H 7/926 .. {by means of traversing devices}

**Common features or details of, or accessories for, spinning or twisting machines of various kinds or types** (drafting arrangements D01H 5/00; twisting arrangements D01H 7/00)

- D01H 9/00** Arrangements for replacing or removing bobbins, cores, receptacles, or completed packages at paying-out or take-up stations (arrangements of general interest in the winding of filamentary material {B65H 67/00}){ ; Combination of spinning-winding machine}
- D01H 9/001 . {Bobbin-taking arrangements}
- D01H 9/003 .. {Graspers operating under the action of a fluid}
- D01H 9/005 . {for removing empty packages or cans and replacing by completed (full) packages or cans at paying-out stations; also combined with piecing of the roving}
- D01H 9/006 .. {for two-for-one twist type machines}
- D01H 9/008 .. {for cans}
- D01H 9/02 . for removing completed take-up packages and replacing by bobbins, cores, or receptacles at take-up stations; Transferring material between adjacent full and empty take-up elements
- D01H 9/04 .. Doffing arrangements integral with spinning or twisting machines
- D01H 9/043 ... {for cap type machines}
- D01H 9/046 ... {for flyer type machines}
- D01H 9/06 ... Removing yarn from centrifugal cups on to yarn carriers
- D01H 9/08 .. Doffing arrangements independent of spinning or twisting machines
- D01H 9/10 ... Doffing carriages; {Loading carriages with cores}
- D01H 9/12 ... Manual cop-tube applying apparatus; Stands for cop-tube applying apparatus
- D01H 9/14 .. for preparing machines for doffing of yarns, {e.g. raising cops prior to removal}(stop motions responsive to delivery of a measured length of material D01H 13/24)
- D01H 9/16 .. Yarn-severing arrangements, {e.g. for cutting transfer tails; Separating of roving in flyer}
- D01H 9/18 . for supplying bobbins, cores, receptacles, or completed packages to, or transporting from, paying-out or take-up stations (D01H 9/10 takes precedence); {Arrangements to prevent unwinding of roving from roving bobbins (transporting full yarn bobbins to subsequent machines B65H 67/06+T)}
- D01H 9/182 .. {Overhead conveying devices}
- D01H 9/185 .. {Transporting cans}
- D01H 9/187 .. {on individual supports, e.g. pallets}



- D01H 11/00**      **Arrangements for confining or removing dust, fly, or the like** (cleaning of running surfaces in open-end spinning machines [D01H 4/22](#); separation in general [B01D](#); cleaning in general [B08B](#); air-conditioning [F24F](#), e.g. by filtering [F24F 3/16](#))
- D01H 11/001      . {Hand tools used for cleaning the machines}
- D01H 11/003      . . {with a rotary pin}
- D01H 11/005      . {with blowing and/or suction devices (in general [A47L 7/00](#); in cooperation with thread breakage detecting means [D01H 13/1691](#))}
- D01H 11/006      . . {travelling along the machines}
- D01H 11/008      . {with static field means}
- D01H 13/00**      **Other common constructional features, details or accessories** (for open-end spinning [D01H 4/00](#))
- D01H 13/005      . {Service carriages travelling along the machines (characteristics relating to the apparatus supported by the carriage, see relevant groups, e.g. [D01H 9/005](#), [D01H 9/10](#), [D01H 13/145](#), [D01H 15/00](#))}
- D01H 13/02      . Roller arrangements not otherwise provided for
- D01H 13/04      . Guides for slivers, rovings, or yarns; Smoothing dies (fibre-condensing guides [D01H 5/72](#); {means to facilitate the unwinding of yarn in multiple-twist arrangements [D01H 7/866](#)})
- D01H 13/045      . . {Guide tube}
- D01H 13/06      . . Traversing arrangements
- D01H 13/08      . Twist arresters
- D01H 13/10      . Tension devices
- D01H 13/102      . . {Regulating tension by regulating delivery of yarn from supply package ([D01H 13/108](#) takes precedence)}
- D01H 13/104      . . {Regulating tension by devices acting on running yarn and not associated with supply or take-up devices}
- D01H 13/106      . . . {for double-twist spindle}
- D01H 13/108      . . {Regulating tension by regulating speed of driving mechanisms of unwinding, paying-out, forwarding, winding or depositing devices, e.g. automatically in response to variations in tension}
- D01H 13/12      . Arrangements preventing snarls or inadvertent doubling of yarns (suction end-catchers [D01H 5/68](#))
- D01H 13/14      . Warning or safety devices, e.g. automatic fault detectors, stop motions; { Monitoring the entanglement of slivers in drafting arrangements}; safety devices of general application F16P; indicating devices of general application G08B
- D01H 13/145      . . {set on carriages travelling along the machines; Warning or safety devices pulled along the working unit by a band or the like}
- D01H 13/16      . . responsive to reduction in material tension, failure of supply, or breakage, of

		material
D01H 13/1608	...	{where the paying-out and take-up stations are stopped at one and the same time}
D01H 13/1616	...	{characterised by the detector}
D01H 13/1625	....	{Electro-mechanical actuators}
D01H 13/1633	....	{Electronic actuators}
D01H 13/1641	.....	{Capacitor sensing means}
D01H 13/165	.....	{Photo-electric sensing means}
D01H 13/1658	....	{Associated actuators with mutual actuation, e.g. for two or more running yarns}
D01H 13/1666	....	{Lighting or luminous devices making easier the setting of the breakage of yarns}
D01H 13/1675	.....	{Pencil of rays on side of machines}
D01H 13/1683	....	{Pneumatic sensing means}
D01H 13/1691	...	{Thread breakage detector means associated with pneumatic cleaning devices, e.g. suction of broken end of yarn}
D01H 13/18	...	stopping supply only
D01H 13/181	....	{by stopping supply packages}
D01H 13/182	....	{by raising or lifting of one of the drafting cylinders, e.g. by removing of the loading means}
D01H 13/183	....	{the yarn moving out of its normal path, e.g. by lateral diverting}
D01H 13/185	....	{a plate moving in the nip of drafting or guiding cylinders}
D01H 13/186	....	{guiding or drafting cylinders moving by gravity when a yarn breakage occurs}
D01H 13/187	....	{using means stopping the driving of the drafting, guiding cylinders, e.g. friction clutches}
D01H 13/188	....	{by cutting or clamping yarns or rovings}
D01H 13/20	..	responsive to excessive tension or irregular operation of apparatus
D01H 13/22	..	responsive to presence of irregularities in running material
D01H 13/24	..	responsive to delivery of a measured length of material, completion of winding of a package or filling of a receptacle
D01H 13/26	.	Arrangements facilitating the inspection or testing of yarns or the like in connection with spinning or twisting
D01H 13/28	.	Heating or cooling arrangements {for yarns (removal of heat from machines <a href="#">D01H 1/16</a> )}
D01H 13/30	.	Moistening, sizing, oiling, waxing, colouring, or drying yarns or the like as incidental measures during spinning or twisting
D01H 13/302	..	{Moistening, e.g. for wet spinning}
D01H 13/304	..	{Conditioning during spinning or twisting (for carding or combing <a href="#">D01G 99/005</a> )}
D01H 13/306	..	{by applying fluids, e.g. steam or oiling liquids}
D01H 13/308	..	{by applying solids, e.g. wax}
D01H 13/32	.	Counting, measuring, recording or registering devices (in general, see the appropriate subclass of Section G, e.g. <a href="#">G01B 21/12</a> , <a href="#">G01N 33/36</a> )

<b>D01H 15/00</b>	<b>Piecing arrangements</b> (for open-end spinning machines <a href="#">D01H 4/48</a> ; in machines for producing textile fabrics, see the appropriate subclasses); {Automatic end-finding, e.g. by suction and reverse package rotation; Devices for temporarily storing yarn during piecing (piecing of rovings in combination with replacing of completed packages or cans <a href="#">D01H 9/005</a> )}
<a href="#">D01H 15/002</a>	. {for false-twisting spinning machines}
<a href="#">D01H 15/004</a>	. {for centrifugal spinning machines}
<a href="#">D01H 15/007</a>	. for two-for-one twisting machines
<a href="#">D01H 15/013</a>	. Carriages travelling along the machines
<b>D01H 17/00</b>	<b>Hand tools</b> (cop-tube applying apparatus <a href="#">D01H 9/12</a> )
<a href="#">D01H 17/02</a>	. Arrangements for storing ring travellers; Devices for applying travellers to rings
<b>D01H 2700/00</b>	<b>Spinning or twisting machines; Drafting devices</b>
<a href="#">D01H 2700/01</a>	. Preparatory spinning machines
<a href="#">D01H 2700/20</a>	. Spinning mules; Transmissions
<a href="#">D01H 2700/202</a>	. . Carriages or their movement; Lubrication
<a href="#">D01H 2700/205</a>	. . Spindles or spindle control in spinning mules
<a href="#">D01H 2700/207</a>	. . Yarn delivery rollers; Drawing systems for spinning mules; Silver rollers
<a href="#">D01H 2700/21</a>	. Piecing or cleaning in spinning mules
<a href="#">D01H 2700/22</a>	. Winding devices for spinning mules
<a href="#">D01H 2700/24</a>	. Spinning or twisting machines of different kinds
<a href="#">D01H 2700/242</a>	. . Spinning or twisting devices wherein twist is created during winding
<a href="#">D01H 2700/245</a>	. Conception or fabrication of drafting cylinders
<a href="#">D01H 2700/247</a>	. Guiding means for veil or sliver on drafting systems